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Source: *Technology and Culture*, Vol. 35, No. 3 (Jul., 1994), pp. 476-505

Published by: [The Johns Hopkins University Press](#) and the [Society for the History of Technology](#)

Stable URL: <http://www.jstor.org/stable/3106256>

Accessed: 25-08-2014 09:01 UTC

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Manufacturing Diversity: Production Systems, Markets, and an American Consumer Society, 1870–1930

PHILIP SCRANTON

In considerable measure, historians concerned with the dynamics of the American economy across the last century have placed a growing emphasis on patterns of consumption, strategies for shaping demand, and the meanings users attached to consumer goods, thus balancing an older focus on organizations and technologies of production and transportation. Historical research on American mass consumption has chiefly targeted mass-production sectors of the economy and the great firms that generated what Alfred Chandler has termed “throughput” efficiencies, economies of speed and standardization central to quantity output (autos, canned goods, cigarettes, and, hence, Ford, Campbell Soup, American Tobacco).¹ Across the same era, however, extraordinary expansion was evident in other segments of production for consumer demand, sectors in which throughput practices were virtually nonexistent, standardization a positive hazard to sales, and concentration of enterprises into oligopolies utterly absent. In fashion textiles and apparel, jewelry, furniture, carpets, lamps, and printing, dynamics of growth parallel to, but distinctive from, those documented for mass production emerged to frame a pattern of *extensive* development in batch and custom manufacturing.² The task undertaken in this article is

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¹Alfred Chandler, *The Visible Hand* (Cambridge, Mass., 1977); Susan Strasser, *Satisfaction Guaranteed* (New York, 1989); Roland Marchand, *Advertising the American Dream* (Berkeley, Calif., 1985); Richard Tedlow, *New and Improved* (New York, 1990); Katherine Grier, *Culture and Comfort* (Rochester, N.Y., 1988).

²By “extensive,” I refer to the multiplication of firms, increase of workforces, and in certain places, creation of dense industrial districts that obtained in sectors where economies of scale were few, yet demand and markets grew secularly. The institutional and

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0040-165X/94/3503-0001\$01.00

to recover these components of consumer-goods manufacturing from the historiographical silences that have long enveloped them and to link them with the meanings we have ascribed to "consumer society," thereby laying a preliminary foundation for conceptual refinement and more nuanced research.

This effort will be introduced by some remarks on theoretical and conceptual issues surrounding investigations of consumer societies and a response to a set of recent, relevant studies. A number of problems thus opened up will be sketched before turning toward clarifying the differing structures and processes of mass and batch production in consumer goods in late-19th- and early-20th-century America. Brief profiles of several batch sectors and one fuller case study will be offered for illustration, prefacing a cluster of concluding speculations that attempt to link this invocation of diversity with potentially fruitful ways to enrich our understanding of the production-consumption nexus.

Theory and Concept

To date, the notion of a consumer society has been elaborated inductively, rather than through formal modeling and theory building. It is fundamentally a historical and behavioral concept, at times used to indicate a shift from a presumably producer-oriented society characterized by tradition and scarcity to a world in which wants are mutable and the means for (and meanings of) their satisfaction changing. Capitalist development is deeply implicated in the constitution of a consumer society, but the process is not reducible to economic determinants, some observers preferring to underline this point by using the term "consumer culture" instead.³

Taking Neil McKendrick, John Brewer, and J. H. Plumb on 18th-century Britain as the core text in this matter,⁴ the articulation of a consumer society is connected with six broad elements of a historical setting. First, in terms of general context, such a society will be unlikely to emerge where caste relations prevail or a small aristocracy governs multitudes of landless peasants and more plausible where the social hierarchy is relatively open to upward mobility. Consumption beyond subsistence must be generalizable. Second, what might be called a core social process must gather momentum. McKendrick terms this "the

labor process transformations that accompanied realization of scale economies have often been termed "intensive" development.

³Miles Orvell, *The Real Thing: Imitation and Authenticity in American Culture, 1880–1940* (Chapel Hill, N.C., 1989).

⁴Neil McKendrick, John Brewer, and J. H. Plumb, *The Birth of a Consumer Society: The Commercialization of Eighteenth-Century England* (Bloomington, Ind., 1982).

commercialization of society”—the extension of market relations into increasingly wider realms of goods exchange and social signification, eroding traditional forms of extramarket reciprocity, sumptuary rules, or capacities for individual, family, and community self-provision. Third, at the level of shared expectations, actors must discard static or cyclical conceptions of social and historical order for ideas of progress and “modernity.” This includes shedding models of the economy that posit fixed stores of wealth (mercantilism) and their replacement with notions of expanded reproduction and, by implication, the substitution of market regulation for state-centered economic ordering.

Fourth, concerning institutional capacities, a consumer society depends on technical gains in production and distribution and their management by organizations that can initiate and respond to change as well as process increasing volumes of information. Fifth, in material terms, a consumer society relies on two sorts of performance: the creation of a profusion of goods and the delivery of increasing real earnings to those who produce or handle them (and others who manage production and attendant service sectors). Last, concerning individual values and meanings, the above relations should translate into three shifts: from ascetic dispositions toward goods to patterns of expressive possession, from a tendency to save to an appreciation of the duty to consume, and from self-definitions in terms of work or occupation to social placement defined largely through reference to commodities held by persons or families.⁵

Though others may have added to or revised this scheme, it is highly suggestive, if incomplete. It indicates the complexity of the process, which must involve cultural and ideological recordings, yet gives appreciable weight to “real” (i.e., economic, technological, and organizational) factors. It remains agnostic, however, about the relations among its components, conditional or determinant. Whereas we might regard this formulation as a rich descriptive account of a consumer society, a hornbook of key features, it does not claim to be a theory of its formation process with implications for general explanation.

For any who might consider forging a linear model in which a consumer society succeeds a producer society through cultural and economic modernization, attention to Richard Walker and Michael Storper’s analyses of national growth patterns is crucial. Examining 20th-century capitalist countries, these economic geographers found

⁵Ibid., pp. 2–33, 182–88, 333–34. McKendrick’s work relies valuably on an earlier discussion of the “democratization of consumption” by Joyce Appleby (“Ideology and Theory,” *American Historical Review* 81 [1976]: 500–532). For another perspective, which proposes a revolutionary break into consumerism, see Colin Campbell, *The Romantic Ethic and the Spirit of Modern Consumerism* (Oxford, 1987).

four common, but distinct, patterns of growth: the "Japanese . . . which combines modest wage and consumption levels, high profit rates, and very rapid accumulation" reliant on exports and heavy capital investment; the Brazilian, with "very low wages, relatively high investment, mass consumption by the upper classes . . . and erratic macroeconomic performance"; the North American and North European, including "high wages . . . elevated worker consumption . . . moderate profits and moderate rates of investment"; and the British, "modest wages, moderate mass worker consumption, poor profits, weak investment and slow growth." Such diversity indicates that there is "no single path to growth," no assurance of an effective balance of its necessary conditioning factors, and no guarantee of rapid or sustained development even if that balance is attained for some period.⁶ Such variations make the challenge of theorizing a consumer society formidable, perhaps beyond reach.

Should such work be attempted, neoclassical economics, the principal source of elegant modeling in the social sciences, is unlikely to be helpful. As critics have explained, mainstream economics lacks consumption counterparts to the famed land, labor, and capital components of production functions, usually relies on a model of consumers that entails fixed preference sets and isolated choice, and presumes perfect information among purchasers.⁷ The one notable effort to specify a "consumption function" offered a portrait of the consumer that did not "closely resemble the calculating maximizer of the neoclassical world" and located the "drive toward higher consumption" in "the character of our culture," thus assuming much of what needed to be explained.⁸ A more promising venue may be found among institutionalists and economic sociologists, who avoid the reductionism of individualistic and cultural explanations while engaging issues of social routine and economic practice.⁹

⁶Michael Storper and Richard Walker, *The Capitalist Imperative: Territory, Technology and Industrial Growth* (Oxford, 1989), pp. 213–14. A related point is made in Jack Goldstone's review of Campbell's *Romantic Ethic* in *Journal of Economic History* 51 (1991): 1002–3.

⁷Recognition that these deficiencies undercut the predictive utility of economic models has yielded major efforts in the last decade or so to theorize decision making under conditions of imperfect or incomplete information. However, the level of complexity attending such decisions and their embeddedness in noneconomic contexts represents a daunting challenge to such revisionism (personal communication from Ira Gang, Department of Economics, Rutgers University—New Brunswick, N.J.).

⁸Geoffrey Hodgson, *Economics and Institutions* (Philadelphia, 1988), esp. p. 129; James Duesenberry, *Income, Saving, and the Theory of Consumer Behavior* (Cambridge, Mass., 1949), p. 26.

⁹See Hodgson; and Sharon Zukin and Paul DiMaggio, eds., *Structures of Capital: The Social Organization of the Economy* (New York, 1990), esp. chaps. 2 and 3.

If realism is preferred to elegance and “dirty hands” to “clean models,”¹⁰ McKendrick’s inductive format might be supplemented by consideration of four conceptual issues: unevenness, rationality, gender, and the state. As the rooting of a consumer society is a contingent historical process, it is likely to take shape irregularly, with variations in its penetration visible along lines of class, gender, or ethnicity, among religious groupings, or along urban-rural gradients. Further, differing constructions of consumption will coexist and conflict—with political consequences.¹¹ Of what significance are these variations, and how are they linked with the exercise of power in society? Second, is there a species of rationality that exemplifies a consumer society in some meaningful fashion? Distinctions between moral and instrumental rationality, for example, have long been used as a suggestive (if inadequate) shorthand for traditional and modernist societies. Is there a consumerist rationality, perhaps a reconfiguration of producer instrumentalism, that supports forms of discourse reinforcing the “habitus” of consumer societies? If so, how are its claims articulated and how validated?¹²

Gender issues are entwined with the emergence of a consumer society, especially insofar as they are linked to the tensions between received constructions of production as “masculine” and of consumption as “feminine.” Such essentialisms must be critiqued, and variations from them underscored in empirical research, yet it is clear that they were extensively embodied in industrializing North America’s social practice.¹³ Indeed, the advent of particular consumer goods both lessened the gross physical toil of wives and reduced evidence of their productive role in farm and worker households, while tying them more tightly to the market nexus. The relation between styled goods and conventions of middle-class display, a gendered responsibility, has been flagged, yet we have barely

¹⁰Paul Hirsch, Stuart Michaels, and Ray Friedman, “Clean Models vs. Dirty Hands,” in Zukin and DiMaggio, eds., pp. 39–56.

¹¹As in the battle over conservation between consumers of leisure and consumers of timber, water, and waterpower (Samuel Hays, *Conservation and the Gospel of Efficiency* [Cambridge, Mass., 1959]; Donald Worster, *Rivers of Empire* [New York, 1985]), or in agriculture, consumers of food vs. consumers of insecticides (Thomas Dunlap, *DDT* [Princeton, N.J., 1981]).

¹²Pierre Bourdieu, *Distinction* (Cambridge, Mass., 1984); Roland Barthes, *The Fashion System* (Berkeley, 1990; orig. ed., Paris, 1967). In this regard, it is worth pondering Barthes’s suggestive comment: “It seems . . . a particular characteristic of our societies—and particularly of our mass society—to naturalize or rationalize the sign through . . . connotation; this explains why the cultural objects elaborated by our society are arbitrary (as systems of signs) yet well-founded (as rational processes); we can then imagine defining human societies according to the degree of ‘frankness’ of their semantic systems and according to whether the intelligibility they assign to things is frankly signifying or allegedly rational” (p. 286). On this point, see also Orvell (n. 3 above), pp. 50–55.

¹³For a model effort, see Joy Parr, *The Gender of Breadwinners* (Toronto, 1990).

begun to connect the abundance of goods, the transformation of men's work, and increase in women's labor-force participation with formulation of multiple versions of male and female identities.¹⁴

As for the state, ending its fetters on trade and production was one element in the 18th-century extension of the British market economy, yet state provisions (for highways) and permissions (ads on audio and visual media, tax write-offs of home mortgage interest) were critical to the elaboration of 20th-century American consumerism. How did the state get back in? Why and under what circumstances?¹⁵ And ultimately, with what consequences for the system for producing and distributing consumer goods? Each of these issue areas merits closer scrutiny than has been evident thus far and, as well, integration within an interpretive framework for description and analysis of what are taken to be consumer societies.

Historiography

A comprehensive review of recent work on American consumer-goods industries and the democratization of consumption would demand a separate essay. Here, reference to several prominent monographs will simply highlight a focus on mass production and distribution and identify one tension within the portrait that has resulted. David Hounshell's acclaimed study traced the evolution of technologies and organizations that gave the "American system" of manufacturing its distinctive identity. Culminating with Ford's Model T, this manufacturing genealogy traces the forebears of River Rouge back to Whitney and Colt's halting efforts to achieve parts interchangeability and a productive division of labor in manufacturing rifles and revolvers, both for the state and for private markets. More directly consumer-oriented were antebellum clockmakers who adopted special-purpose machines, coarse gauges, and standard parts to achieve quantity, if not precision, output.¹⁶

¹⁴Ruth Cowan, *More Work for Mother* (New York, 1983); Orvell; Susan Porter Benson, *Counter Cultures* (Urbana, Ill., 1985); Mark C. Carnes and Clyde Griffen, eds., *Meanings for Manhood* (Chicago, 1990), in which see esp. chaps. 7, 9, and 11; and Ava Baron, ed., *Work Engendered* (Ithaca, N.Y., 1991).

¹⁵For suggestive thoughts on the 1920s, see William Barber, *From New Era to New Deal: Herbert Hoover, the Economists, and American Economic Policy, 1921–1933* (New York, 1985). More generally, see Peter Evans et al., *Bringing the State Back In* (New York, 1985), chaps. 1–4; Fred Block, *Revising State Theory* (Philadelphia, 1987); Claus Offe, *Contradictions of the Welfare State* (Cambridge, Mass., 1985); and Bjorn Wittrock, "Social Science and State Development," *International Social Science Journal* 41 (1989): 497–507. In the American case, state actions of significance long centered on protective tariffs, from the Civil War Morrill Acts through Smoot-Hawley (1930). See Frank Taussig, *Tariff History of the United States*, 8th ed. (New York, 1931).

¹⁶Discussed in great detail in Donald Hoke, *Ingenious Yankees* (New York, 1990).

Hounshell finds the American system's post-Civil War lineage furthered through sewing machine and cabinet construction and, in capital goods, manufacture of reapers for farms. In both cases, quality was initially assured by craft-style techniques that were supplanted by gauge and machine-centered standardization once demand blossomed to tens or hundreds of thousands of units annually. The bicycle craze of the 1890s fathered a battery of metal-forming and stamping practices that found wider application once Ford determined to make an automobile for the common man. In each case, a virtuous cycle arose among technical innovation, diminished prices, effective marketing, and massive orders, serially building "a regime of mass production," in merchandiser Edward Filene's phrase, that bid fair to "liberat[e] the masses . . . from the struggle for mere existence," hence defying Malthus and astonishing the world.¹⁷ Consumer goods were at the heart of this epochal transition, as was the technological process through which luxuries were transformed first into what McKendrick termed "decencies" and finally into simple necessities.¹⁸

If we shift our glance from factory to market, three related works treat the distribution system, advertising, and department stores during the generations before World War II. As Susan Strasser and Roland Marchand explain, creating a mass market was especially daunting for bulk producers of staple goods—low-cost foodstuffs, soaps, and similar nondurables manufactured in vast quantities at technically current (and expensive) plants. Wholesalers in their thousands bought such goods on price comparisons alone; but producers, who were often carrying huge debt loads from mergers and equipment expenditures, routinely fought this practice and set fixed prices through massive, direct advertising (to consumers and retailers) of fictively differentiated "brand name" goods. Such marketing practices added expense, but effectively created specific demand, so that high prices could be maintained for items sold first as safe, healthful, or consistent in quality, and later through psychological ploys as modern, socially necessary, or signifiers of motherly competence.¹⁹

Among purchasers, women were both the chief targets of such advertising and the dominant shoppers at department stores, "palaces of consumption," in hundreds of American cities by 1900. Unlike neighborhood groceries or sundry shops, however, department stores

¹⁷David Hounshell, *From the American System to Mass Production* (Baltimore, 1984), quoted matter from pp. 305, 307.

¹⁸McKendrick et al. (n. 4 above), p. 1.

¹⁹Strasser (n. 1 above); Marchand (n. 1 above). As present-day supermarket shoppers well know, the price differentials between brand-name staples, chain-store lines, and "no name" items are substantial, a result of brand advertising expenditures on one hand and commitments to run plants at capacity (yielding excess goods sold to no-frills packagers).

stocked few standard goods. Their special status in retailing, and that of independent specialty stores, derived from offering fashionable, styled items for the homes and persons of au courant, middle- (or higher-) class consumers. Not Uneeda Biscuits, but arrays of batch-produced garments and Wilton carpets built department store profits and the reputations of buyers who anticipated the vogue swings of high-end markets. Working-class women entered such refined spaces either as employees or as shoppers in bargain basements, where Filene and others promoted inventory turnover by discounting “dead stock.”²⁰ Though they were central sites of mass distribution, department stores and adjacent specialist retailers had little to do with the momentum of mass production.

Finally, if we turn to households, work by Miles Orvell and Ronald Edsforth is illuminating. Surveying middle-class interiors, Orvell notes the abundance of furnishings and objects, often highly decorated imitations of “vaguely aristocratic modes” of the sort created in batches by Grand Rapids furniture firms or Philadelphia tapestry mills. By 1900, a reaction developed, “as the saturation of *things* reached the limit of containing space,” but simplicity and authenticity penetrated literary values more rapidly than living rooms. Electrification increased the presence of mass consumer goods in homes (7.5 million phones by 1920), but efforts to achieve a “single, fixed ‘American’ style” convenient for mass production collapsed into a “fragmentation of design modes” by the 1930s.²¹ Discussing Michigan industrial workers, Edsforth stresses sizable advances in real income during the 1920s that enabled most to occupy “electrified homes or flats” they outfitted with appliances, radios, and phonographs and suggests their responsiveness to publicity appeals that “encouraged working people to mimic the affluent life-style of the business class.” Unfortunately, he is silent on their selection of clothes, furniture, or jewelry, but from the 1870s, lines of imitation middle-class specialties, tailored for working-class budgets, had been offered in all the fashion-sensitive sectors.²²

These works illustrate the magnetism that mass production and mass consumption hold for American scholars. Still, with Susan Porter Benson and Orvell, there is a glimmer of the other side of industrial-

²⁰Benson (n. 14 above); National Retail Dry Goods Association, *Twenty-five Years of Retailing* (New York, 1936).

²¹Orvell (n. 3 above), pp. 48, 69, 142, 196. For architects’ and designers’ growing hostility to ornament after 1890, see Stuart Ewen, *All Consuming Images* (New York, 1988), pp. 124–34.

²²Ronald Edsforth, *Class Conflict and Cultural Consensus: The Making of a Mass Consumer Society in Flint, Michigan* (New Brunswick, N.J., 1987), pp. 32–33. See also D. Horowitz, *The Morality of Spending* (Baltimore, 1984); and Grier (n. 1 above).

ization, the specialty and batch trades that generated a profusion of difference. Taken together, this body of work reminds us that both standardized goods *and* diversely styled specialties fueled mass consumption across the half century after the American centennial. Linking the two sorts of products occasions several comments.

From McKendrick, Hounshell, and Strasser, it appears that the profusion and variation of 18th-century British manufactured goods gave way to staple and standard production, that concentrations of large corporations succeeded a congeries of small firms, and that American consumer demand was homogeneous. Such inferences are incorrect, for productive diversity expanded *in tandem* with bulk manufacturing. Indeed, several dynamics coexisted as consumption democratized. One exemplified the transition of specific classes of goods from luxuries to “decencies” to necessities; indoor plumbing might be a sound example, ca. 1830–1930. Yet inside this process of extension there was a powerful trend to diversity. Whereas all social classes might ultimately have similar pipes and valves, the related fixtures, kitchen appointments, and hot water radiators varied wildly in style and price. Similarly, as carpeting became a standard feature of first middle-class, then working-class, homes, firms crafted elaborately differentiated grades and designs priced for every imaginable income level. Such tactics extended the market, not through Adam Smith’s division of labor paradigm, but by means of product multiplication.

At the same time, consolidated makers of simple staples (soap, crackers) were engaged in a different, multidimensional campaign. They denigrated home production and generic goods, fashioned effective throughput manufacturing systems, and fostered a preference for brand name items, generally at higher prices than substitutes. To what extent these producers shaped the democratization of consumption is debatable. Finally, firms mass producing entirely new classes of consumables (autos, telephones, lamp bulbs) had to erect, and in some cases maintain, vast technological systems for their support, plus convince potential buyers of their practical and status utilities. The McKendrick sequence played a role here, especially in autos, but business and government were critical “consumers” and legitimators of communications and electrical technologies.²³ No simple diffusion or modernization model can capture the intricacy of these unfolding relations, much less that of the conflicts they generated.

From a user’s point of view, batch and mass-produced goods carried a variety of meanings and implications. Styled goods, whether durable

²³Philip Scranton, *Figured Tapestry* (New York, 1989); Strasser; Thomas Hughes, *American Genesis* (New York, 1989).

or ephemeral, were artifacts of personal identity and made claims concerning family or class position that could not be so readily derived from Heinz ketchup or Lux soap.²⁴ Style established openings to social networks, but as well masked differences between public and private “realities.”²⁵ The high-tech novelties of the Second Industrial Revolution were initially somewhat similar. For a time, having a car or being “on the phone” announced both one’s wealth and/or status and signaled modernity, but this quickly passed from the personal to the generic. Once tens of millions of homes were electrified or linked by phones, distinctiveness faded into vague expectations of class (except for some autos—a canary yellow Packard touring car spoke to individual identity in ways a Model T might not).

More important perhaps, possession of cars, phones, radios, and electrical fixtures necessitated ongoing linkages to (and dependence on) wide networks outside the household, connections not entailed by owning silk dresses or pearl collar buttons. External agents provided power, maintenance, replacement parts, and information; expenditures were continuous, and credit perhaps needed, exposing one to outside assessments of worthiness according to objective (and objectifying) criteria. Developing relations with certain standard goods from integrated corporations had thus the potential to draw individuals and families into social integration and standardization. At the other extreme, custom-made goods lay beyond the terrain of batch diversity and were closest to being “pure” expressions of identity. Whether as commissioned wedding rings or artwork among the wealthy, or photo portraits for farm and worker families, such items approached the direct extension of self into artifacts. To be sure, such ascription of patterns of meaning to classes of goods is conjectural, intended only to evoke the diversity of relations and possible lines of transformation over time. It is not feasible to “read off” meanings from artifacts alone, for their roots are social and situational.²⁶ Equally, keeping Walker and Storper in

²⁴Here class, ethnicity, race, and rural-urban contexts provide lines of differentiation for the status and identity implications of such goods.

²⁵Clothing is especially salient here, as was noted from the time of the Lowell “girls.” See Thomas Dublin, *Women at Work* (New York, 1979); and more generally and evocatively, Richard Sennett, *The Fall of Public Man* (New York, 1977).

²⁶There are other categories of goods and services beyond those mentioned here, notably public goods (highways), ritual goods and services (religious, fraternal), and what Fred Hirsch terms “positional” goods inherently in scarce supply (beachfront houses, courtside seats at professional basketball games). See Fred Hirsch, *Social Limits to Growth* (Cambridge, Mass., 1976), and commentary in Fred Block, *Postindustrial Possibilities: A Critique of Economic Discourse* (Berkeley, Calif., 1990), pp. 180–88, along with, more broadly, Mary Douglas and Baron Isherwood, *The World of Goods* (New York, 1980); and Orvell (n. 3 above).

mind, it should be expected that varied constructions of the meaning of a consumer society can be specified for different spatial units, especially nation-states.²⁷

American Consumer Goods and Production Formats, 1870–1930

Thus far, it has been noted that four broad classes of consumer products were manufactured for American markets during the Second Industrial Revolution—custom, batch, bulk, and mass-produced items. Contemporaries tended to lump these categories into two groups, “special” goods, encompassing custom and batch work, and “repetition” or “duplicate” output, merging bulk and mass, thereby recognizing that two broadly dissimilar ways of going about business followed from commitments either to product diversity or standard goods.²⁸ To this point, entire industries have been treated as though they fell on one side or other of the divide, but this cannot stand closer examination.

In practice, most industries and many firms bridged the gap. To appreciate this, fuller (and to a degree arbitrary) precision must be given to the four categories to show how their nominal boundaries were variously observed and violated. Custom work is simple to grasp; each item was built to individual specifications, whether drawn by client or by maker, or in collaboration.²⁹ Certain staple components might be used, as, for example, jewelry “findings,” standard chains or stone-settings kept on hand, but the object would not be duplicated unless the client wished (a matter of custom or, on occasion, contract).

Batch goods were prepared for unknown buyers, by contrast, and the only exclusivity pledged (by some firms) was spatial, a formal or informal promise to reserve sales in a definite territory to one downstream purveyor. This point indicates a further distinction; makers rarely vended batch goods to final users, but channeled products either

²⁷If we move beyond the consumption of goods to consideration of services, this diversity of constructions will be all the more vivid, in treating, for example, health care and child care, education, services to the aged, or provision for the mentally or physically impaired. On a related boundary issue, does the fact that an abundance of consumer goods now fills once-barren shops in Poland suddenly make it a consumer society? If Poles exhaust their hoarded zlotys in a few years’ fevered purchasing of imported goods, and the nation’s productive system falls into wreckage due to the collapse of Soviet ability-to-pay and exclusion of Polish goods from European Community markets, driving Poland toward Third World status, will it cease to be a consumer society? Is “consumer society” equivalent to “mature capitalism”?

²⁸John Richards, “Economic and Labor Factors in the Distribution of Industries,” *Engineering Magazine* 19 (1900): 98–106.

²⁹For example, a knowledgeable buyer might approach a silverware firm with a drawing of a vase she wished made, whereas another, less stylistically informed, might simply say, “Make me something striking in the Georgian mode of my other tableware.” At Gorham, presentation cups and trophies were often the occasion for close consultations.

directly to retailers or through jobbers and wholesalers to them. As in custom work, batch producers made for orders and fashioned sample styles for seasonal demand that were circulated among middlemen, shop owners, or department store buyers for review. Once orders drifted in, production schedules, machine assignments, and labor tasking could proceed smoothly. Manufacturers discovered through this procedure which novelties among their sample ranges had snatched segments of demand. Such operators regarded making for inventory with horror, as that approach gambled with the firm's solvency, given that goods remaining unsold at season's end could only be unloaded to "vultures" at deep discounts. How big was a batch? No one could or did say, and in a sense the question is wrongly framed. If a shoe, textile, or furniture sample "hit" the market just right, the firm might commit a major fraction of its workers and machinery to its manufacture for months at a time. Conversely, if orders for two dozen of a sample materialized, the company was just as obligated to fill them. Batch manufacturers often marketed *capacity* as much as they sold diverse goods.³⁰

The bulk industrial format entailed creation of staples for stock, commodities that positioned their makers as price takers in markets governed by ready substitution, often fairly inelastic demand, and stable product categories or quality grades. Here were located firms devoted to work shoes and clothes, print cloths and blankets, many foodstuffs, inexpensive pine or gumwood chairs and tables, knitted "union suits," or, as noted above, intermediate components of final goods—jewelry findings or standard yarns for weaving. Whatever the range of outputs, according to size or quality, from year to year, these changed little. Hence the imperatives of price competition pushed such firms to cost-saving innovations, whether technological or organizational.

Mass production is one of the least interrogated concepts in business history and the history of technology, but, with Hounshell, I take it to refer to complex production systems in which the impact of dedicated (inflexible) machinery, extensive division of labor, and massive economies of scale mandated strategies of market enlargement and control, backward and forward integration, and price management. Oligopolistic competition resulted (in auto, electrical products, gasoline), if not monopoly (in telephone or electrical power). Among historians and economists, the significance of Ford's famed rigidities has been overstressed, and General Motors' or General Electric's flexibility underappreciated. Mass production was not just making masses of a few things perennially; that was more the case in bulk enterprise. Instead, mass

³⁰Philip Scranton, "Diversity in Diversity," *Business History Review* 65 (1991): 27–90, and *Figured Tapestry* (n. 23 above).

production involved a continuous institutional and technological search for means to identify and scale up novelties that fit production systems oriented toward runs at the level of hundred thousands, if not millions, of units. Building inventories made sense only if prices could be defended rigorously and technological change integrated within the firm's product strategy (hence the logic of planned obsolescence and company-controlled model changes). Marketing of mass-production goods involved brand naming, heavy advertising, dependent dealerships (in oil and autos), or efforts at price maintenance (in grocers' and drug store lines).³¹

Now for the variations and boundary crossings. Few firms could survive with solely a custom orientation; more common was the batch manufacturer who would take on special orders (at special prices) in slack periods or when favored or well-heeled clients made requests. Batch firms selectively ventured into bulk lines when trade was dull, accumulating stocks of staple fabrics, rings, or tables to keep their workforces relatively intact. This tactic was impossible for many companies, however. A lace manufacturer did not have the equipment to make staple cotton goods, though he might try running a few thousand yards of plain netting for milliners. No perfume maker would venture into bulk chemicals; nor could a silk hosiery firm embark on fill-in production of knitted underwear. Technology, market contacts, and the risks of price taking constrained the reach of batch producers seeking to mix bulk lines with their regular practice.³²

On occasion, bulk-oriented enterprises sought entrance to the halls of variety and fashion as a refuge from brisk price competition. The inauguration and development of American Woolen provides a good instance. William Wood's original company, the Washington Mills of Lawrence, Massachusetts, made staple wool and worsted fabrics subject to harsh price battling in the 1890s depression. When markets revived at the decade's end, Wood boldly merged his firm with roughly a dozen other mills, many of which had long been active in fashion wool or worsted lines. The amalgamation was in 1900 the largest single producer in the national market and for a time was able to govern price levels in both staple and fashion wools and worsteds, in part due to Wood's

³¹Price maintenance was a hotly contested strategy on the part of mass producers, who sought (and eventually gained) the right to set retail price levels for their outputs, so as to eviscerate price cutting by competing retailers. See Edwin Nourse and Horace Drury, *Industrial Price Policies and Economic Progress* (Washington, D.C., 1938); and Edwin Seligman and Robert Love, *Price Cutting and Price Maintenance: A Study in Economics* (New York, 1932); along with Strasser (n. 1 above), pp. 255, 270–82.

³²Philip Scranton, "Build a Firm, Start Another: The Bromleys and Family Entrepreneurship in the Philadelphia Region," *Business History* (U.K.) 35 (1993): 115–51.

aggressive manipulation of prospective buyers.³³ American Woolen's market power swiftly eroded after World War I, and few other bulk firms were comparably situated. Makers of cheap side chairs rarely could envision adding mahogany bedroom suites to their lines, and brogan manufacturers were ill-suited for the rigors of competing with Florsheim for the business-class style trade. Even so, the borders between these formats were more porous than might initially be imagined. Indeed, a few mass producers leaped them easily, defying any facile categorization.

Most mass-market-oriented firms stayed resolutely on the terrain of intensive production, adding products closely related to their main focus (e.g., Heinz, Campbell Soup) or artificially differentiating essentially identical goods (American Tobacco). Still, a handful of corporations, especially in electrical manufacturing, bridged all segments of consumer-goods markets and also held sway in capital (or producers') goods. Here stood General Electric and Westinghouse, corporations Thomas Hughes would term "system-builders," concerned incrementally with an entire, broadly configured market. Both commenced, more or less, with arrays of products for power and lighting but by the 1910s and 1920s had diversified into varied lines of consumer electrical appliances. Some of their outputs were sold to independent assemblers; others were infused into company products. From customized turbines for power plants to Christmas tree bulbs, these companies covered the market.

At the same time, auto manufacturers other than Ford used extensive contracting to commission batch production of components, more at Chrysler than GM but significantly for both, feeding into the system Hounshell terms "flexible mass production," the matching of dedicated assembly systems with diverse combinations of product features.³⁴ All were open to specialty contracting, as GE's and GM's ventures into locomotive manufacturing indicate.³⁵ Obviously, such lateral strategic moves lay outside consumer-goods markets, but they do illuminate the comprehensive reach of these great, mixed-format enterprises. In general, their consumer-oriented products represented scale-seeking outputs, whereas their producer goods involved custom, batch, and repetition production by turns (e.g., huge transformers, electrical escalators, and switches, respectively).³⁶

³³Scranton, *Figured Tapestry*, pp. 181–86.

³⁴Hounshell (n. 17 above); Steve Jeffreys, *Management and Managed: Fifty Years of Crisis at Chrysler* (New York, 1986); Scranton, "Diversity in Diversity"; Hughes (n. 23 above).

³⁵Thomas Marx, "The Diesel-Electric Locomotive Industry" (Ph.D. diss., University of Pennsylvania, 1973). Both firms labored to convince purchasers of the utility of standard engines, seeking to counter railroads' predilection for specialties that long sustained Baldwin's preeminence. See John Brown, "Baldwin Locomotive Works" (Ph.D. diss., University of Virginia, 1992).

³⁶Scranton, "Diversity in Diversity" (n. 30 above).

Defensive or aggressive company strategies brought firms to cross over from a core format for production into other modes, but the incidence of such departures was modest (and often temporary, outside electrical). Batch manufacturers generally sought profit and accumulation through pricing that reflected timeliness, diversity, and quality, whereas bulk and mass producers relied on volume, cost-shaving, and brand identification. These differing orientations were evident both among consumer-goods sectors and *within* a number of them. It might be expected that few batch specialists operated in flour milling or food canning, and mass production of carpets or lace was absent. However, in many sectors (furniture, textiles, jewelry, glass, pottery, printing), nodes of batch and bulk output did appear. Although most furniture firms relied on skill and variety, by 1920 hundreds of plants, especially in the South, made a few dozen models of cheap chairs and tables for bulk sale at the bottom end of the market, while others created standard lines (e.g., school desks) that evaded style competition by shunning consumer demand entirely. In jewelry, bulk producers were auxiliary to final goods firms, appearing in the 1890s as suppliers of machine-made brass chain or "German silver" settings (findings), components for the low-end trade.

In textiles, the mix was different, as bulk production of cotton yarns and staple fabrics constituted at least half of all outputs until roughly 1900. Batch specialists in silks, worsteds, carpets, fine hosiery, and so on, could ignore the southern textile surge, for roughly through World War I Dixie cottons covered only coarse to middling grades of standard fabrics. In printing, Bibles and hymnals might be produced in bulk (and in forms standard for decades), but outputs were ephemeral and diverse in other subsectors (newspapers, job printing, book publishing, magazines and journals, art prints and music).³⁷ This lack of uniformity makes using aggregate statistics to estimate the extent or performance of batch manufacturing quite difficult, though rough calculations hint that printing/publishing, into the 1930s, offered greater capital efficiency and higher overall value added than did chemical production (chiefly a bulk sector).³⁸

Three features common to batch manufacturers will help round out this overview: skill, spatial concentration, and specialization. To make

³⁷Ibid.; Scranton, *Figured Tapestry* (n. 23 above); Warren Chappell, *A Short History of the Printed Word* (Boston, 1980), chaps. 8 and 9; Frank Comparato, *Books for the Millions* (Harrisburg, Pa., 1971); John Tebbel, *Between Covers* (New York, 1987); James P. Wood, *Magazines in the United States* (New York, 1949); Victor Strauss, ed., *The Lithographers Manual* (New York, 1958), chap. 1.

³⁸Manufacturing census statistics (presented in table 1) offer a comparison. The figures show that it took nearly twice as much capital to create a dollar of value added in chemicals as in publishing and that though on this measure the chemical industry improved its capital efficiency in the World War II decade, so did the printing trades.

TABLE 1
MANUFACTURING CENSUS STATISTICS

Year	Value Added (\$ Millions)	Capital (\$ Millions)	Value Added/Capital
Printing and publishing:			
1904.....	424	450	.94
1929.....	2,233	2,622	.85
1937.....	1,785	2,320	.77
1948/49.....	4,659	3,984	1.17
1957.....	7,913	6,632	1.19
Chemicals and allied products:			
1904.....	286	634	.45
1929.....	1,737	3,942	.44
1937.....	1,732	3,537	.49
1948/49.....	5,848	9,109	.64
1957.....	12,308	19,138	.64

SOURCE.—*Historical Statistics of the United States* (Washington, D.C., 1975), Series P-65, P-153, and P-154. All figures are in current dollars.

many different products well, a firm must have either a complement of versatile, skilled workers or a flexible machine system (or both). In several branches of metalworking, notably parts production for automobiles, the development of tool-and-die techniques for forging, pressing, and stamping permitted relatively quick shifts among long runs of components, lowering the skill demands for precision output. In most batch consumer-goods sectors, however, no such technical strategy was available. Materials lacked uniformity (as with wood and fibers) or resisted mechanical handling (fabrics); production sequences offered numerous bottlenecks (composition and proofing vs. presswork in printing). In consequence, general-purpose technologies were entrusted to skilled workers on whose judgment and experience rested firm capacities for quality and timely production.

Such enterprises were, perhaps more than routinized companies, environments of reciprocity, continuous problem solving, and the accumulation and application of “tacit” knowledge.³⁹ Managerial authority rested more on exhibiting a “practical” understanding of production specifics than on applying principles of engineering, organizational design, or scientific management. Workers expected to be involved in shop-floor decisions on routing rush jobs, selecting new machinery or tools, and, in some cases, hiring additional operatives.⁴⁰

³⁹Edith Penrose, *The Theory of the Growth of the Firm* (Oxford, 1959); Michael Best, *The New Competition* (Cambridge, Mass., 1990), chap. 4; Michael Polanyi, *The Tacit Dimension* (1966; Gloucester, Mass., 1983).

⁴⁰Philip Scranton, “The Politics of Production,” in *Technology: Aesthetics, Culture, Politics*, ed. Fred Block, Alfred Rieber, and Marsha Siefert (Baltimore, 1994, in press); Walter Licht, *Getting Work: Philadelphia, 1850–1950* (Cambridge, Mass., 1992), chaps. 2–5.

These relations were strongly expressive of male gender-role expectations; the introduction of women or their predominance (as in millinery and sections of textile and apparel manufacturing) created dissonances and conflicts about the links between skill, sex, and "voice."⁴¹ Moreover, as market demands were both seasonal and subject to longer business-cycle fluctuations, most workers could anticipate layoffs with some regularity, adding to the environment's contingencies.⁴² For hundreds of thousands, the chance to use and develop skills in changing and challenging tasks evidently offset the irregularity of employment and in some sectors (apparel, jewelry, furniture) chronic, relatively low earnings.⁴³

In both consumer and producers' goods, batch manufacturers strongly tended to cluster locationally, a feature of their spatial patterning that surely eased displaced workers' job searches. In complex industrial cities (New York, Newark, Philadelphia), newly starting firms by 1870 routinely commenced operations near existing companies, plugging into and further developing what economists call economies of agglomeration. Spatial propinquity, in a context of expanding demand, served both veteran and blossoming companies in several ways. Immigrant and migrating workers were drawn to such concentrations by their multiple employment prospects, swelling and replenishing the labor pool. Prospective clients likewise flowed to such areas in search of stylistic novelties, as did agents with innovations to vend. Firms sited singly beyond the periphery of these centers faced higher labor search, marketing, and information costs if they could not devise a means to effect a presence there.

At some threshold, sets of entrepreneurs commenced building sectoral institutions at the boundaries of firm and market, collective efforts that could reinforce the other advantages industrial districts possessed. These groups could (and did) handle credit reviews and collections, short-term finance (industrial banks), insurance, labor relations (both in union battling and through employment bureaus), education, shared "openings" of new styles, and political action (from factory regulation

⁴¹Ruth Milkman, ed., *Women, Work, and Protest* (Boston, 1985); Ava Baron, "Questions of Gender: Deskillling and Demasculinization in the U.S. Printing Industry," *Gender and History* 1 (1989): 178–99; Albert Hirschmann, *Exit, Voice, and Loyalty* (Cambridge, Mass., 1970), chap. 3; Parr (n. 13 above).

⁴²Licht; Alex Keyssar, *Out of Work* (New York, 1986).

⁴³In the auto surge and ensuing World War I boom, thousands of wood and jewelry workers left their trades for new employment, relieving an oversupply of furniture men for a time, but augmenting a skills shortage in jewelry. Elsewhere, in textiles, apparel, and printing, there were few defections. Auto trade openings for woodworkers diminished steadily in the 1920s, leading to a reflux of experienced men. Jewelers did not return, one sign of the trade's declining fortunes. See Scranton, "Politics of Production," and "Diversity in Diversity" (n. 30 above).

to federal tariff policy). At Philadelphia such associations were created by Kensington, Germantown, and Frankford textile operators, shoe and apparel manufacturers, and metal trades companies. Their colleagues followed suit in New York printing, clothing and jewelry, Newark metalworking, Providence-area jewelry and textiles, Grand Rapids and Jamestown (New York) furniture, and at comparable sites across the manufacturing belt from Boston to Milwaukee. Their clubrooms hosted periodic banquets and a constant exchange of information, though most members remained secretive about styles until seasonal ranges were opened to public view.

Industrial districts also had distressing features. Adept rivals could “knock off” copies of hot-selling items, bid up wages to steal talented workers, or cut prices to court preference from wholesalers. Trade associations worked to prevent or correct predatory actions that menaced collective prosperity, with effects that ranged from impressive in furniture to pathetic in jewelry. Though we know relatively little as yet about these institutions for sectoral governance, their role in binding competitors into durable communities of interest and practice should not be underestimated.⁴⁴

Last, for all their versatility, batch manufacturers gradually also became specialists of a sort over the two generations after 1870. Two tracks seem to have been prevalent. In the immediate postwar decades, urban printers, furniture houses, and jewelry workshops commonly took up a full range of production options, as did most machinery builders in capital goods. Printers did job work, books, and journals and at times attempted lithography for illustrations. Furniture lines were wide-ranging as well, and jewelers worked in gold, silver, or brass along the spectrum from fine stylings to common novelties. Between 1880 and 1900, newly commenced companies, often started by workers expert in a particular class of goods, increasingly focused on subsections of the trade—bedroom or kitchen sets, electroplated jewelry, promotional pamphlets and stationery. Generalists thus were succeeded by specialists, each able to execute diverse tasks within a more narrowly defined field.

⁴⁴See Howell Harris, “Getting It Together,” in *Masters to Managers*, ed. Sanford Jacoby (New York, 1991), pp. 111–31; Scranton, *Figured Tapestry* (n. 23 above), and “The Legacy of Specialization: American Industrial Districts and the Decline of Paterson,” *New Jersey History* (Summer 1994), in press; Charlotte Morgan, *The Origin and History of the New York Employing Printers’ Association* (New York, 1930); National Industrial Conference Board, *Trade Associations: Their Economic Significance and Legal Status* (New York, 1925). Often national trade associations have been seen as the only significant agents of industrialists’ collective action. They were most effective and visible in bulk and mass-production sectors, but for batch enterprises in industries with multiple formats, regional subsectoral organizations were key.

In fashion textiles and apparel, such generalists had never been prominent; from the early 19th century, styled fabric making had been divided by fiber and process, while apparel segregated into men's tailors, women's seamstresses, and "slop" work (coarse, ready-to-wear clothing), plus widespread household production.⁴⁵ In these fields, increased demand and technical innovation triggered a refined division of labor at the level of the firm. New subspecialties arose and prospered: carpet yarn spinning, hosiery finishing, contractors for buttonholing or fabric and garment design. Both lines of development spoke to the necessities and opportunities of the batch format. Transaction cost analysts might suggest that, in environments of uncertain demand, incorporating a full range of productive capacities within the firm entailed larger hazards than advantages, hence a congeries of specialists linked by contracts proved a satisfactory (or satisfying) industrial structure. As far as it goes, this is helpful, but Michael Best suggests that a third option was (and is) often exercised: "The choice for the firm is not simply whether to make or buy, but whether to make, buy, or collaborate. Collaboration depends upon the establishment and nurturing of inter-firm consultative institutions," of the sort evident, though differentially effective, in the batch industrial districts mentioned above.⁴⁶

In addition to specializations, such districts also spawned and supported collateral and auxiliary enterprises. Real estate promoters erected manufacturing buildings offering "apartments with power" to fledgling tenants. Machine-building, repair, and drive-belting firms sprouted uniformly, as did companies devoted to recycling waste, whether fibers for packing or jewelers' floor sweepings reprocessed for their traces of gold and platinum. Intricate and flexible networks were key to the technical vitality and market success of batch producers, but their development was necessary, not sufficient, for growth, as the following case example suggests.⁴⁷

Furniture: Style, Production, and Market Relations

To add elements of movement and change to the preceding, fairly static, overview, a sharply delimited sketch of the furniture trade (ca. 1870–1930) may be worthwhile. Here there can be no extensive review

⁴⁵Bernard Smith, "A Study of Uneven Industrial Development: The American Clothing Industry in the Late 19th and Early 20th Century" (Ph.D. diss., Yale University, 1989).

⁴⁶Best (n. 39 above), p. 131. See also Hodgson (n. 8 above), pp. 199–208. On textiles and apparel, see Scranton, *Figured Tapestry*, and "Apparel Arts and the Development of the U.S. Men's Clothing Industry," in *Apparel Arts*, ed. Giannino Malossi (Turin, 1989), 2:13–24. See also Morgan (n. 44 above), pp. 42, 72–74, and notes below on furniture practice.

⁴⁷Scranton, "Diversity in Diversity."

of technical and labor process developments, labor relations, costs and cost accounting, materials supply, entrepreneurship and bankruptcies, or structural and locational shifts, all of which would inform a fuller portrait. Instead, this “case” will stress governance and the relationships between production and marketing, focusing on one major center’s course, after opening remarks set the scene.

From the colonial era through the early republic, American furniture was made crudely by farmers, or serviceably by rural carpenters, or to higher degrees of quality in town and city craftshops often operated by European immigrants. Population increase and diffusion, together with the decay of household production, boosted demand for furniture; but its weight and the expense of transportation made most markets local, or at best regional, with the result that furniture shops surfaced in every substantial market town. Particularly in cities, craft capacities were overmatched by calls for furniture, yielding by the 1840s the classic process of machine innovation and task subdivision. Still, balky materials and the importance of style and finish entailed the primacy of hand work, with machines slotted into, not utterly transforming, the labor process.⁴⁸

Furniture factories by the 1860s thus resembled enlarged craftworks dotted with steam-driven saws, planers, and molders used for preparation of parts that were hand shaped, fitted, assembled, colored, varnished, and polished. Producers beyond the coastal cities gathered at points having access to rail or river transport and stands of hardwood forest (Cincinnati, Grand Rapids, and Jamestown). As wood stocks were exhausted, the bundling of trade experience and reputation with transport facilities permitted some centers to expand further, others to develop from small beginnings (Chicago; Rockford, Illinois; High Point, North Carolina), while yet others faded in their absence (Cincinnati). In constant dollars, national production more than doubled between 1869 and 1890, doubled again by 1910 (to above \$200 million), then tripled in value over the ensuing fifteen years (to \$605 million in 1925), before collapsing after 1929 (see table 2). These terrific gains in output value flowed from a workforce that grew only 70 percent, 1905–25 (to 232,000), as the number of firms rose little more than a third (to 4,800) over the same span.⁴⁹

⁴⁸J. L. Oliver, *The Development and Structure of the Furniture Industry* (Oxford, 1966), pp. 14–15, 48–57; Arthur White, “Recollections of an Onlooker,” *Furniture Manufacturer and Artisan* (hereafter *FMA*) 1 (1911): 74–75, 93.

⁴⁹Oliver, pp. 88–94; *Historical Statistics of the United States* (Washington, D.C., 1975), Series P-58, P-60. Producers’ value of household furniture in current and real dollars is presented in table 2. On Cincinnati, see Donald Pierce, “Mitchell and Rammelsberg: Cincinnati Furniture Manufacturers,” in *American Furniture and Its Makers*, ed. Ian Quimby

TABLE 2
PRODUCERS' VALUE OF HOUSEHOLD FURNITURE

Year	Current (\$ Millions)	Real (\$ Millions) (1913 = 100)
1869.....	58	49
1890.....	95	116
1900.....	107	139
1910.....	202	216
1920.....	620	393
1925.....	623	605
1930.....	441	424

SOURCE.—*Historical Statistics of the United States* (Washington, D.C., 1975), Series P-335 and P-372.

Several comments on this pattern are in order. First, due to the diversity of product classes and styles, among other factors, explosive growth occasioned no trend toward industrial concentration, as found in a number of staple and throughput sectors. Yet the increase in firms and workers was far outpaced by output value. The standard explanation would look to technological gains and innovations in organization. Recent scholarship rejects these factors as highly significant,⁵⁰ though some new techniques, layout revisions, and cost accounting practices did diffuse. Two alternatives are worth consideration. Firms may have trended up-market, so as to use the slowly increasing pool of labor to make appreciably higher-value units, perhaps also a second-order response to rising disposable incomes and enlarging white-collar employment across the economy. In addition, companies may have simply increased prices faster than inflation and devised means to obstruct reductions in periods of deflation (notably 1921–22). Here sectoral institutions for price and policy management, which the Federal Trade Commission (FTC) investigated during the early 1920s, could have offered leadership and governance mechanisms.⁵¹ Despite holding only 5 percent of the industry’s workers and a tiny fraction of its firms, Grand Rapids became the styled furniture trade’s pivot, the point of reference for design and institutional novelties adopted elsewhere. Solving the above puzzle makes closer examination of this Michigan hub essential.

(Chicago, 1979), pp. 209–29; and for Jamestown, see Paul Spengler, “Yankee, Swedish and Italian Acculturation and Economic Mobility in Jamestown, N.Y., 1860–1920” (Ph.D. diss., University of Delaware, 1977).

⁵⁰Parr (n. 13 above), pp. 128–33; Michael Ettema, “Technological Innovation and Design Economics in Furniture Manufacture,” *Winterthur Portfolio* 16 (1981): 197–224.

⁵¹For trade commentary on prices and the FTC, see *FMA* 83 (1921): 164–67, and almost any issue in vols. 84–87 (1922–23).

Until the 1870s, Grand Rapids was only one among scores of midwestern towns “built on wood,” but it possessed the advantage of being served by four rail lines reaching east through Detroit, south through Indiana, and west to Chicago. The market panic of 1873 and the Philadelphia Centennial Exposition of 1876 provided the occasions for local innovations critical to achieving preeminence. In December 1873, with sales rapidly receding and orders being cancelled, the Berkey and Gay firm announced through regional newspapers a ten-day auction sale of stock on hand, a clearance effort joined by other firms. Repeated in subsequent years, this year-end sell-off was by the late 1870s reframed as a collective unveiling of new style samples, organized by the manufacturers’ Furniture Exposition Association. This shift suggests shared learning from the depression: whereas making for stock shortened delivery times and captured orders in prosperous years, it was potentially ruinous in contracting markets. A dozen local plants soon discovered the power of joint marketing. By 1880, buyers from Boston, Philadelphia, Toledo, Chicago, and Milwaukee were registering to view samples offered “in the white,” for production and finishing to order. Before 1882, local firms closed their retail outlets (including three in New York City) to concentrate on wholesaling.⁵²

The centennial played a role in encouraging Grand Rapids makers to seek national markets, but first it taught them an important, if unpleasant, lesson about design. To that point, factory furniture was styled by proprietors and superintendents whose “incompetency was equaled only by their audacity,” as trade journal editor Arthur White commented caustically. Three Grand Rapids companies enlisted samples of their work for Philadelphia display, but may shortly have regretted joining the celebration. “While the workmanship of these suites was fairly good, the designs were incongruous, and expressed nothing of value in art. In comparison with the foreign exhibits of furniture . . . the Grand Rapids collection was sorry to contemplate.” Chastened by the critical reception to their “crude efforts,” they packed their devalued medals and samples, commenced studying design guides by Spofford, Eastlake, and Hovey, and began recruiting experienced designers, then training them informally (usually wood-carvers and owners’ sons) before establishing the Kendall Art School, another collective institution that carried on through the 1950s.⁵³

Between 1880 and 1900, the Grand Rapids industry overcame two depressions and expanded from fifteen to thirty-four companies, from two to six thousand workers, and from \$2 to \$7.5 million in annual sales.

⁵²Frank Ransom, *A City Built on Wood* (Grand Rapids, Mich., 1955), pp. 13–15, 22.

⁵³White (n. 48 above), p. 94; Ransom, pp. 17, 27.

The typical veteran firm produced “three or four hundred different pieces of furniture, each with its own design or purpose,” with demand for middling-priced units seldom passing “fifty to a hundred identical pieces,” while “in higher priced goods, a cut of twenty-five pieces was considered almost the maximum.” Wholesale prices were usually reached by doubling expenses for materials and labor, with retailers marking up their purchases another 100 percent.⁵⁴ These parameters underscore the critical relationship between the furniture expositions and production practices. Pricing was based on a minimum-sized “cut” (the order to transform stock lumber into all the components of a particular model), about a dozen for top-end goods or twenty-five for lower grades. However, companies could not wait until a full dozen units had accumulated from scattered orders before cutting, nor was it sensible to cut parts for six (which wrecked the pricing basis) or cut twelve and build six (keeping track of the components for the others was maddening). Instead, at some trigger point in the flow of orders, a cut was made, the full batch assembled, the items having buyers were finished and the rest stored in the white, awaiting calls. Thus, the imperatives of batch furniture production meant that every firm would have, each year, more or less overhanging inventory of white goods.

The expositions, expanded to twice yearly (July and January) in the 1880s, provided one remedy to this hazard, a timely consolidation of ordering during two intense three-week spans of marketing activity. Advertising, time-coordinated sample making, and eventually the provision of spaces for display involved collaboration among firms. But when hundreds of buyers descended on the displays, made their selections, and departed, firms individually scheduled cuts and assembly of the winning styles; with any luck, for several months all work-in-progress would be spoken for. Early expositions drew urban and regional wholesalers, with department store buyers and major independent retailers joining the crowds by 1900. But if hundreds came, thousands of retailers did not or could not; thus, manufacturers dispatched travelers to assigned territories after the expositions, men briefed on the season’s brightest sellers and, doubtless, on the stocks of white goods left over among thinly demanded styles. Their telegraphed sales orders filled out production and depleted warehouse inventory as the season wound down. Meanwhile, designers sketched and refined plans for the coming season’s samples, which the mills’ most skilled

⁵⁴J. E. Land, *The Industries of Grand Rapids, Michigan* (Grand Rapids, 1882); Ransom, pp. 13, 31. Cut registers for the Century Furniture Company (Archives, Grand Rapids Public Museum), ca. 1900–1906, confirm that batch sizes for production clustered around steps between twelve and thirty-six units, with larger cuts occasional after seasonal openings and smaller (two to six units) common to complete end-of-season fill-in orders.

workers crafted, finished to perfection, and had photographed (for the travelers' style books) in time for the next exposition.⁵⁵

Apart from rising attendance, there were three other signs that the expositions were serving to organize the styled furniture market. First, outside companies began shipping samples and leasing space in the city for the semiannual openings, beginning in 1881. In short order, makers of lines not prominent in Grand Rapids (e.g., upholstered furniture) and of auxiliary furnishings (lamps, wall hangings) joined woodworkers from New York, Indiana, Ohio, and Missouri in seeking room to sell. The locals exacted punishing rental fees from the incomers, most spectacularly in the 1880s, when a hotel charged a St. Louis firm \$800 for three weeks' use of its billiard room. Second, whereas Grand Rapids companies initially had used factory floor space for exhibition, by the late 1880s permanent exhibition halls were constructed, one of which contained eight acres of showroom area. By the turn of the century, eight such facilities were regularly being leased for market openings. Third, within two decades, this format was duplicated elsewhere: in New York, the nation's central fashion goods market (yet negligible in furniture production); in Chicago, the Second City, significant in upholstered goods; and at Jamestown, a growing furniture center between Buffalo and Cleveland. By 1910, it was clear that exposition style openings addressed dilemmas fundamental to the industry, but there were other issues which also fostered Grand Rapids' institutional creativity.⁵⁶

A critical feature of marketing furniture was relations with the railroads that hauled the goods. Furniture was bulky yet light compared to much railway cargo and of middling value on these linked parameters (compared with coal and silk fabrics, at either extreme). This status led to endless wrangling over "classifications," which determined rates charged and took into account the vulnerability of furniture to damage in transit (hence, claims, along which scale it rested higher than either coal or silks). One of the chief tasks of the Grand Rapids Furniture Manufacturers Association, formed in 1881, was to deal with such matters, as well as with problems created by "insolvent and dishonest dealers." Its successor, the Furniture Freight Bureau (1886), continued the collective effort to achieve favorable rates and plan consolidated shipments until 1920, when it gave way to the Furniture Manufacturers'

⁵⁵Ransom, pp. 20–23; *Michigan Artisan* 12–42 (1886–1901): passim. *Michigan Artisan* was the predecessor of *FMA*. My thanks to Gordon Olson, Grand Rapids City Historian, for assistance with these and other sources on the regional furniture industry. Along with style books, firms (and wholesalers) often had catalogs printed showing woodcuts or photos of furniture, and mailed them to potential clients in advance or instead of travelers' visits.

⁵⁶Ransom, pp. 22–23; *Furniture Journal* 27 (July 10, 1907): 105, (August 25, 1907): 39.

Warehouse Association, which by decade's end was managing shipments of 4,000 carloads annually.

Similarly, the association long sponsored a labor bureau that managed the area job market, authorizing transfers among firms to prevent poaching and supervising fairly standard pay rates for different skill levels. National alliances among furniture firms foundered, however, for "makers of parlor furniture had practically no interests in common with the manufacturers of office desks or chamber suites; [and] interests [in] rattan furniture were not identical with the producers of kitchen furniture." Such grand amalgamations dissolved in the 1890s, "and the various branches of the furniture . . . industry have since been organized as independent bodies," as White noted in a 1911 article. A revived national association later served chiefly as a publicist for "good furniture."⁵⁷

Another, and much murkier issue, was pricing and price defense. Standard economic theory supposes that efforts at price-fixing are implausible outside environments of market control by monopolies or small groups of oligopolistically structured firms dominating a commodity. In situations of dispersed capacity, no subset of firms should be in any position to govern pricing, for premiums achieved thereby will soon attract outsiders who will undercut the agreement, enhancing system efficiency by offering the same goods for marginal (rather than egregious) profits, pushing deviators back toward an equilibrium level. Yet few theorists have taken up situations where products are not simple commodities, but exist in tens of thousands of variants, and where the logic of duplication is constrained by the imperative of novelty.⁵⁸ Price-fixing is not quite the same as exercising discipline against pressure to cut prices on incommensurable products. What counts as commensurable is itself a judgment call, but in furniture, pace Gertrude Stein, a table was not a table, a chair not a chair. With hundreds of types and styles, every claim of sameness (and substitutability, were price not

⁵⁷Ransom, pp. 47–48; Arthur White, "Recollections," *FMA* 2 (1911): 636–37. This too was copied in the form of the Southern Freight Association. See John Selby, "Industrial Growth and Worker Protest in a New South City: High Point, North Carolina, 1859–1959" (Ph.D. diss., Duke University, 1984). For the warehouse association and its "car-loading department," see Furniture Manufacturers' Association (FMA) Papers, Accession no. 84, box 2, Michigan Room, Grand Rapids Public Library.

⁵⁸For the closest thing to a serious effort, see John Beath and Yannis Katsoulacos, *The Economic Theory of Product Differentiation* (New York, 1991), which attempts a mathematical formalization of the conceptual issues of multiproduct markets under neoclassical assumptions. However, as is customary among economists, they "assum[e] that each differentiated product is produced by a single firm" (p. 184), making the work's utility limited. For a related attempt that does include multiproduct firms, see A. Shaked and J. Sutton, "Product Differentiation and Industrial Structure," *Journal of Industrial Economics* 36 (1987): 131–46.

lowered) was subject to dispute when buyers pushed for concessions. Here, environments and histories of collaboration among producers could frame discipline against demands for self-lacerating price cutting, defenses such as were mounted in 1907, 1913, and 1920 among styled furniture makers.

These were often informal understandings, concretized through the openings for buyer comparison and information-sharing contacts among firms that expositions offered, and at times confirmed by actions of trade associations. In 1907, for example, furniture makers announced that, despite the panic, buyers cancelling orders in expectation that frightened makers would court their custom at prices reduced a quarter or more should be disabused of any such predatory notions. List prices would stand; *caveat emptor*. In times of buyers' aggressiveness, all eyes turned toward Grand Rapids. If its complement of firms refused to bend and instead cut production and maintained "values," others in related or noncompeting lines were emboldened to do likewise, denominating a form of "price leadership" distinct from that exercised by U.S. Steel or Anaconda in copper.⁵⁹

There would of course be individual breaks, on the part of firms pressed by threats of insolvency or seduced by the lust for aggrandizement, but across thirty years of increasing market power by major buyers in consumer goods, furniture firms expanded output values at stunning rates. If anything like "pure" competition or a prevalence of standard or staple commodities had dominated the industry, a very different result would have been expected. At Grand Rapids alone, between 1900 and 1927, the number of companies doubled (to 70), as did workforce (to 12,100), while output values multiplied from \$7.5 to \$56 million, a frankly staggering outcome in the absence of standardization, massive throughput efficiencies, or decisive consolidation of enterprises.⁶⁰ In batch furniture production, the construction of solidarity, sectoral leadership, and institutionalized information (and backbone) sharing

⁵⁹*Furniture Journal* 27 (November 25, 1907): 42, (December 11, 1907): 98, (December 25, 1907): 121. During the 1920 price collapse, the Grand Rapids Furniture Manufacturers' Association (GRFMA) hosted a meeting of delegates from high-end regional furniture associations to set common terms and price-defense guidelines. Unable to attend, the Jamestown firms wrote to confirm that they would "cooperate with the Grand Rapids manufacturers in every way possible." From Rochester, New York, came the pledge that "we want to act along the same lines as the Grand Rapids manufacturers and whatever they decide to do we will follow" (FMA Papers, box 15, folder 22). When the Federal Trade Commission investigated furniture industry practices and the Department of Justice indicted 250 firms for price collusion, the GRFMA alone fought vigorous, successful court battles to challenge federal regulation.

⁶⁰Ransom (n. 52 above), p. 52. In real terms (1913 dollars), production was \$9.7 and \$54 million at the two dates.

critically supported sufficient profitability to assure the preservation of flexible capacity.

Furniture enterprises were hammered by the Great Depression, as consumer durables purchasing stood low among hard-pressed citizens' priorities. Nonetheless, the first three decades of the present century were described as "thirty prosperous years" by a historian of the Grand Rapids industry.⁶¹ The reversals the Depression brought, their intersection with state policies, union organizing efforts, spatial restructuring within the sector (particularly the advance of southern furniture production), the drive toward design simplification (and consequent pressures for standardization and price competition) and the consolidation of retailing—all these matters are beyond the scope of this article. Yet for half a century at least, Grand Rapids exercised a species of trade leadership that mirrored patterns evident among other successful mass and batch producers of consumer goods.⁶² The ability to sustain profitable pricing, despite the incursions of the FTC and protests by wheedling distributors, stands as testimony to the value of institutionalized solidarity among batch producers and its capacity to deliver informally a stability comparable to that obtained in bulk or mass lines by corporate consolidation and technological advance.⁶³

To frame an account of American consumer goods production and distribution that takes production technologies and market structures seriously, mass, bulk, and specialty industries must be engaged from a perspective that acknowledges difference rather than expects uniformities of development. There may well be greater commonality in organization, sectoral structure, and technical or market imperatives among mass producers than among bulk enterprises, and the greatest diversity at the batch and custom end of the spectrum. But these will be empirical discoveries and food for theoretical contemplation, rather than derivations from universal principles that devalue the nonconforming instance.

Conclusion

Lest this discussion be indicted for having two distinct and unrelated parts (abstract considerations on the consumer society and an empirical treatment of consumer goods trades), a conclusion that links them in some workmanlike fashion is needed. In providing it, the tactic of

⁶¹Ibid., p. 51.

⁶²As with mass producers discussed by Strasser (n. 1 above), Grand Rapids firms were technologically progressive price setters who established national brand naming (and attacked infringers in court) and conducted aggressive marketing.

⁶³Few clusters of batch specialists matched these achievements, however. For a discussion of difficulties that haunted the jewelry trade, see Scranton, "Diversity in Diversity" (n. 30 above).

suggesting how the foregoing empirical findings might affect our appropriations of theory will be adopted, understanding that such appropriations can in turn make the historical patterns outlined more intelligible. Four theoretical "regions" seem to me most helpful here: economic sociology and its notion of embeddedness, Anthony Giddens's structuration theory and its concept of social integration, the approach to consumption goods anthropologist Mary Douglas offers, and the concept of trust relations forwarded by Charles Sabel and other sociologists. A brief return to McKendrick's consumer society of 18th-century Britain will draw us back to history and bring this essay to a close. These comments are indicative, not prescriptive, for they build on work in progress.

The arrays of goods offered by specialist firms to all strata of American markets in the six decades after the 1870s, their blooming profusion of styles and grades, the enormous uncertainties attendant on their production, and the institutions fashioned to mediate this complexity should all be clues to the impossibility of reducing dynamics of sectoral evolution and market relations to consequences of simple price comparisons by consumers with known and fixed preferences. In the United States, at least, consumer tastes were embedded in a congeries of gendered cultural, political, and class or status milieux that were themselves mutable across time, hence the potential utility of institutionalist or sociologically informed economic approaches to historical analysis of industrial diversity. For manufacturers and retailers, detecting the characteristics of varied and specific demand was an information problem of heroic proportions. This challenge was thus critical to the logic of product profusion among batch manufacturers. Control over styling was never entirely manageable through advertising, copying of European vogues, or collective marketing. Fashion was ever the wild card in the deck of profit and accumulation, and its permutations lay beyond the cost rationalities which presumably held sway in consumption of staples (and against which brand-namers in soap or flour warred).⁶⁴

The prowess of Grand Rapids' furniture sector may be keyed to Giddens's understanding of how social integration occurs and discipline is established. Integration generates routines and expectations of behavior that constitute a community, and this process depends on "the time-space paths that the members . . . follow in their day-to-day activities. Such paths are strongly influenced by, and also reproduce, basic institutional parameters of the social systems in which they are

⁶⁴See Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91 (1985): 481–510; Zukin and DiMaggio, eds. (n. 9 above); and Strasser.

implicated." Discipline depends on "enclosure," the capacity to manage borders and direct or control behavior, a point relevant to Max Weber's depiction of bureaucracy as well. For reasons suggested above, if not fully specified, the furniture trades managed to author integrative institutions that fostered "co-presence," shared values, and common practices vis-à-vis channels of distribution, a dynamic keyed to Grand Rapids' expositions and style-goods leadership. In other specialty trades, no such social integration could be fashioned, and outside niches of specialization, free-form competition ruled, frequently yielding design piracy, worker poaching, predatory pricing, and after the 1910s, secular decay.⁶⁵

These angles of appreciation can be fruitfully combined with Mary Douglas's sense that "consumption is . . . not the end point in the economic process, but . . . the sphere where a segment of social culture and individual wants are generated." Should we think only about soap or ten-penny nails, this observation may be somewhat obscure, but when placed against patterns of self- and home furnishing, this perspective closes the circle of production and consumption by linking the latter through identity and culture back to production issues and their information paradoxes. Witnessing consumption of diverse goods, firms seem to have had either too much or not enough information to mark out an optimal manufacturing strategy, again a dilemma that was connected with the profusion approach, eclectic styling, and the imperative of making samples for preliminary feedback. Much economic theory presumes that production drives consumption; that the equation may also work culturally in reverse fashion is provocative theoretically and was real enough practically for batch consumer goods firms.⁶⁶

The furniture case also highlights the issue of trust relations which Sabel, among others, has considered at some length. In contexts of institutional governance and product diversity, buyers and workers both depend to a marked degree on trust-imbued relations with firm operators. Workers are acknowledged in social terms for assuring the quality of the goods purveyed, and buyers rely on such assurances, for they cannot in detail examine and assess each object that flows through their distributive enterprises. Establishing Grand Rapids quality as an

⁶⁵Anthony Giddens, *The Constitution of Society* (Berkeley, Calif., 1984), pp. 142–58. Here the obsession with secrecy regarding styles created a starkly different day-to-day path of practice in jewelry vs. the openness of furniture firms, at least in style terms, at expositions. The quick cycle of duplication in jewelry and the impossibility of matching such rapid design thievery in furniture were material elements of differentiation in these trades, but there were surely accumulated cultural dispositions that influenced firm behavior as well. For a closer look at Giddens's perspective, see Philip Scranton, "Giddens' Structuration Theory and the History of Technology" (conference paper, Technological Change, Oxford University, September 1993).

⁶⁶Douglas and Isherwood (n. 26 above); Hodgson (n. 8 above).

industry benchmark, defending it (in court at times) against those who would copy name and style but cheapen the goods, meant in essence preserving producers' capacity to set and protect pricing that assured accumulation and reinforced the basics for trust at all levels. The utter absence of such commitments and practices was implicated in other specialty trades' demoralization, for the solidification of sectoral reputations in turn undergirded an ability to bound or manage risk in crisis situations, outside the primacy of market (price) mediations. In furniture, such commitments accentuated the salience of the nonmarket components of transactions, those cultural elements that transform exchange *relations* into durable *relationships*, both on the shop floor and with clients.⁶⁷

Last, if we revisit McKendrick's vision of English consumer society formation in the 1700s, two points of reconsideration merit attention. McKendrick viewed the transition of fashion goods from luxury items to goods whose possession "was made possible for an ever-widening proportion of the population" as both "an engine for growth" and "a motive power for mass production."⁶⁸ The closer look here offered at styled-goods trades would sustain his growth imagery but heavily discount the notion that this activity related propulsively to mass production, which he specified quite imperfectly. Second, it should be clear by now that massive consumption of a sector's goods does not entail the achievement of bulk or mass production of standardized items, a matter made insufficiently clear throughout McKendrick's text.⁶⁹

Overall, unpacking the category "consumer goods" to reveal the variety of production systems involved in provisioning a public could have a useful result in acclimatizing scholars of consumer societies to the complexity of the networks of design, technology, labor process, and distribution involved in historical mutations of manufacturing. Such sensitizing should be married to recognizing the need to engage multiple streams of theoretical discourse as a part of the effort to comprehend this diversity. Every effort to compress historical practice into narrative involves substantial reductions of detail, but I hope some warning signs about excessive simplification have been posted here. Integrating diversity into our efforts to document consumer cultures is a challenge worth embracing.

⁶⁷Charles Sabel, "Studied Trust: Building New Forms of Cooperation in a Volatile Economy" (conference paper, TEP Conference, Paris, June 1990; revised version, September 1990); Block (n. 26 above), pp. 82–85, 199–203.

⁶⁸McKendrick et al. (n. 4 above), p. 66.

⁶⁹Ibid., pp. 97–98.